

## **CHAPTER SIX**

### **UNCONSTRAINED AND POTENTIAL DEMAND ESTIMATES**

Through airport and airline records, it is possible to identify the number of passengers using Arizona's existing commercial service airports. This information is available for each of the study airports on both a current and historic basis. Passengers are recorded at each airport annually as enplanements; an enplanement is defined as a passenger boarding a commercial air carrier. These records do not, however, identify total unconstrained enplanement demand that is associated with each airport's market area since some passengers leave the local airport market area and board aircraft at other more distant, competing airports. Obviously, for those airports currently without commercial air service, all of the passengers associated with their market areas are using other airports for commercial air transportation. This process is referred to as passenger leakage or erosion.

As part of the Air Service Study for Arizona, each study airport, both those with existing service and those currently without that may have the ability to support service, were evaluated to identify its "unconstrained" level of enplanement demand. This unconstrained passenger demand represents the total level of demand that would theoretically occur if each airport's frequency, price, and quality of commercial air service were ideal. Nationwide, few locations, if any, have service that is considered ideal by all potential users. As a result, passenger leakage in the deregulated airline-operating environment takes place from virtually all markets. As an example, Phoenix captures some portion of demand from almost all Arizona markets due to its high level of departures, availability of major/national jet service, and presence of low cost carriers such as Southwest Airlines. While each of the study airports has an associated unconstrained level of passenger demand, service will never be provided to a level, especially in the smaller markets of Arizona, that will attract 100 percent of this unconstrained demand. Even with realistic service improvements, some level of passenger leakage will continue.

For this study, unconstrained passenger demand levels were identified using each airport's historic and current enplanement levels in combination with data from passengers, travel agents, businesses, and the town meetings that were described in previous chapters. Each market's unconstrained passenger demand level is comprised primarily of its current passenger leakage and to a lesser extent "latent" demand that could be stimulated through improved service. Latent passenger demand includes those travelers who now drive versus fly and those who do not fly because they find the service unacceptable in some way (i.e., price, frequency, reliability, size of aircraft, etc.).

In addition to identifying unconstrained passenger demand levels, it is also necessary to identify a level of enplanement demand that reflects conditions that cannot be changed in each market area. Such conditions indicate that continued passenger leakage should be anticipated. For instance, an

airport's distance to larger airports with better service cannot be changed. Therefore, it is likely that some percentage of passengers will continue to leave the local market area to board aircraft at larger, more distant airports. This level of more conservative passenger attraction is referred to as "potential" demand. For this study, potential enplanements are a subset of each market's unconstrained passenger demand level. Potential enplanements are those that might be anticipated at each airport if conditions or events are present that enable each airport to capture a higher percentage of the total unconstrained air travel demand associated with its market area. The potential demand scenario assumes that, to a reasonable level, passengers associated with each market area will begin to use the airport most convenient to them with greater frequency. Inherent to this scenario is the assumption that passengers (both residents and visitors) will decrease the frequency with which they leave the local market area to use more distant commercial service airports, both within and beyond Arizona.

## 1. EXISTING DEMAND FOR AIR SERVICE

As previously noted, existing demand is identified only through enplanement records that show the number of passengers who actually board commercial service aircraft at the airports that currently have service. **Table 6-1** presents the 1997 annual enplanement levels for each of the airports that are currently served by commercial air carriers. As discussed, these enplanement levels reflect both local and non-local (visitor) passengers, who chose to enplane at each airport, but these enplanement levels do not necessarily reflect total demand for air service in each market area. If all airports provided an equal level of service in terms of their number of airlines, size of aircraft, number of frequencies, nonstop destinations served, and price, each airport would theoretically capture all demand that is associated with its market area. These factors and others, including highway competition, however, affect the actual capture of this "unconstrained" level of demand.

Markets such as Sedona, Winslow, and Safford, which do not currently have scheduled commercial air service, do not have enplanement figures from which to determine the existing demand for commercial air service. Therefore, to develop estimates of "unconstrained" and "potential" demand for these markets, an analysis of factors other than enplanements must be conducted.

Service areas, discussed in a previous chapter, were identified for all of the study airports, including those airports that are currently without airline service. The "actual" service areas were developed based on a review of survey results. In order to develop existing demand levels for markets currently without airline service, population within those market areas were reviewed. As presented in Chapter Four of this study, the theoretical service areas of the various airports in Arizona and in surrounding states overlap considerably. This overlap suggests that demand for markets such as Bullhead City, Kingman, and Lake Havasu City may be duplicative if each airport's pool of potential passengers is examined independently. Several of the markets were, therefore, grouped to provide a means of examining ratios that compare population of a combined market area to enplanement levels for several airports.

TABLE 6-1	
Arizona Department of Transportation Arizona Air Service Study	
1997 ENPLANEMENTS AT STUDY AIRPORTS	
City	1997 Enplanements
Bullhead City	64,094
Flagstaff	47,058
Grand Canyon	632,971
Kingman	1,559
Lake Havasu City	10,668
Page	25,623
Prescott	10,043
Safford	n/a
Sedona	n/a
Show Low 1/	n/a
Sierra Vista	12,014
Winslow	n/a
Yuma	75,165
Note: n/a=not applicable	
1/ In 1997, scheduled service was only provided for four months. During these four months, approximately 1,300 passengers were enplaned. If this enplanement level is extrapolated to account for a full year, approximately 3,900 enplanements would be realized at Show Low in 1997. For the purpose of this analysis, 3,900 enplanements will be assumed for Show Low.	
Source: Airport Management Records	

Demand for air travel is generally considered to be directly related to a number of socioeconomic factors, including population. In the development of unconstrained and potential demand levels, ratios of enplanements to population were reviewed to provide a basis for evaluating markets and developing demand estimates for markets where service does not currently exist.

Because of the overlapping in certain service areas, the population of these areas was combined for this analysis. Table 6-2 shows the grouped service areas and the resultant enplanements per capita ratios. As shown in Table 6-2, ratios were also developed for Phoenix Sky Harbor and Tucson International to determine a statewide population per employment ratio. The average enplanement per population ratio nationally ranges from 1.0 to 2.0. High ratios are usually associated with markets that draw a substantial amount of visitor related travel, either vacation or business related. For markets that fall well below the national ratio, substantial passenger leakage to a competing market may be occurring.

TABLE 6-2

Arizona Department of Transportation  
Arizona Air Service Study

ENPLANEMENTS PER CAPITA DEVELOPMENT

<b>Airport/Service Area</b>	<b>Service Area Population</b>	<b>1997 Enplanements</b>	<b>Enplanements Per Capita Ratio</b>
Bullhead City/Kingman/Lake Havasu City	97,368	76,321	0.78
Flagstaff/Grand Canyon/Page/Sedona	113,490	88,505 1/	0.78
Prescott	54,795	10,043	0.18
Safford	21,244	n/a	0.00
Show Low	22,760	3,900	0.17
Sierra Vista	52,435	12,014	0.23
Winslow	16,190	n/a	0.00
Yuma	79,240	75,165	0.95
<b>Study Area Totals</b>	<b>457,522</b>	<b>265,948</b>	<b>0.58</b>
Phoenix	2,865,900	10,783,467	3.76
Tucson	815,800	1,774,927	2.18
<b>Statewide</b>	<b>4,139,222</b>	<b>12,824,342</b>	<b>3.10</b>

Note: n/a=not applicable

Source: Arizona Department of Economic Security  
 Airport Management Records  
 Wilbur Smith Associates, Inc.  
 AirTech, Inc.

1/ Includes only those enplanements for the Grand Canyon which are estimated to be non-tourist related.

Phoenix Sky Harbor's actual 1997 enplanements were reduced by 30 percent due to its connecting hub status. This reduction was undertaken to reflect the true level of passengers that are originating in or are destined for Phoenix. This 30 percent figure is an estimate, based on the level of activity at Phoenix Sky Harbor and estimates of connecting traffic at other hub airports. Atlanta Hartsfield Airport estimated in 1992 that approximately 65 percent of its traffic was connecting versus 35 percent local traffic. Since 1992, the airport estimates that its connecting traffic has decreased to 45 percent with 55 percent local traffic. Denver International estimated that in 1995, approximately 45 percent of its traffic was connecting versus 55 percent local traffic.

As shown in Table 6-2, the enplanement per capita ratios range from 0.17 at Show Low to 3.76 at Phoenix. Of the study airports, Yuma has the highest level of enplanements per capita with 0.95. It is interesting to note that, except for the combined service area of Bullhead City/Kingman/Lake Havasu City, the ratios fall into the same groupings discussed in the previous chapter for large, intermediate, and small airport market areas. These break points indicate that with varying levels of population and service, the lower the population, the lower the enplanements per capita ratio. Statewide, the enplanement per capita ratio is 3.10. By comparing each airport's ratio to statewide and national ratios, the relationship between the demand for commercial air service in each market and the population of the market area can be determined. This methodology will be used to estimate demand for commercial air service for those airports that currently do not have scheduled commercial service. This relationship was also considered as part of the process to establish each study airport's unconstrained demand level.

To identify unconstrained demand levels, each airport's 1997 enplanements were translated into an existing capture rate of each market's total air travel demand. Existing capture rates for each airport were determined through analysis of information obtained through this study's survey efforts.<sup>1</sup> Table 6-3 presents the various passenger capture rates from this study's two primary surveys, passenger and travel agent. As shown on Table 6-3, the results from the two surveys provided very different estimates of existing passenger capture rates at study airports. To develop a more accurate depiction of leakage, the two survey results were combined to produce a weighted averaged. Travel agency survey results were found to be more reflective of actual capture because they include data on all passengers, both those who are using the local airport and those who are using competing airports. The passenger survey results only include the passengers who chose to use the airport during the survey period. Passenger survey results indicate that most study airports have a fairly loyal customer base who almost always select the local airport to begin commercial airline travel. Percentage wise, however, these travelers are relatively a small percentage of all air travelers associated with each market area. There are also travelers who split their air travel between the local airport and a more distant competing airport. The largest percentage of travelers in each market area, however, are thought to be always using a more distant competing airport. Therefore, the travel agency results were assumed to count for three-fourths of the average, while the passenger survey results were

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<sup>1</sup> It is estimated that 2.5 percent of the annual enplanements at this airport are attributed to local travelers. The remaining travelers consist of visitors who are seeing the Grand Canyon as part of package tours.

TABLE 6-3

Arizona Department of Transportation  
Arizona Air Service Study

AVERAGE CAPTURE RATES

City	Passenger Survey Rate	Travel Agency Rate	Average
Bullhead City	78%	6%	24%
Flagstaff	72%	17%	31%
Grand Canyon	n/a	5%	3%
Kingman	70%	4%	21%
Lake Havasu City	68%	12%	26%
Page	75%	24%	37%
Prescott	67%	6%	21%
Safford	0%	0%	0%
Sedona	0%	0%	0%
Show Low	56%	0%	14%
Sierra Vista	74%	5%	22%
Winslow	0%	0%	0%
Yuma	82%	38%	49%

Note: n/a=not applicable

Source: AirTech, Inc.

given a less significant weight in the process to determine each market's unconstrained demand.

This methodology shows Yuma capturing the highest rate of demand with an average of 49 percent. In terms of average capture rates, Page (37 percent), then Flagstaff (31 percent) followed Yuma. The overall average capture rate for the nine airports is 29 percent. This means that statewide more than 70 percent of the enplanements that could use a study airport are using a more distant competing airport.

Unconstrained enplanement levels were developed using the capture rates shown in Table 6-3 for the airports that have scheduled commercial air service. For those airports that are not currently served by a commercial carrier, an average enplanements per capita ratio was used to develop an unconstrained demand estimate. This ratio, 1.77, was applied to the service area populations for four airports (Safford, Sedona, Show Low, and Sierra Vista) to produce unconstrained enplanement estimates. As shown in **Table 6-4**, using this methodology it is estimated that the unconstrained enplanement level for all of the study airports is approximately 952,000. This translates into an overall enplanements per capita ratio of 2.06 for the 13 study airports. This ratio is in line with the high end of the national average, but below the state average and is appropriate for markets that experience a significant level of visitor travel.

Unconstrained enplanement levels reflected for each airport in Table 6-4 represent primarily residents and visitors associated with each airport's market area who are now traveling by air, but who are, for the most part, driving to a more distant airport to begin their air travel. The next step in the study process is to determine the level of unconstrained demand that each airport can likely capture, given the conditions each market experiences. These conditions include factors such as each market's proximity to other larger markets, highway access, and the type of service that can realistically be sustained by each airport (i.e., major/national or regional/commuter) given the market's total volume of passenger demand. This level of demand is referred to as each airport's "potential" level of enplanements.

## **2. POTENTIAL DEMAND FOR AIR SERVICE**

As previously discussed, potential enplanements represent an increased percentage of each airport's unconstrained level of enplanements by assuming a higher capture rate of its total unconstrained demand for commercial airline travel. To establish market-specific assumptions related to potential demand, the following factors were examined and considered:

- Current airport-specific enplanement levels and scheduled commercial service levels (i.e. number of carriers, number of daily departures, nonstop destinations served, size of aircraft serving the market)
- Enplanements per capita ratios compared to other Arizona airports and to the average national and statewide enplanement per capita ratios

TABLE 6-4

Arizona Department of Transportation  
Arizona Air Service Study

UNCONSTRAINED DEMAND LEVELS

City	Average Capture Rate	Enplanements per Capita Ratio	1997 Enplanements	Current Unconstrained Enplanements
Bullhead City	24%	0.78	64,094	267,058
Flagstaff	31%	0.78	47,058	151,800
Grand Canyon 1/	>5%	n/a	632,971	15,824
Kingman 2/	21%	0.78	1,559	15,714
Lake Havasu City	26%	0.78	10,668	41,031
Page	37%	0.78	25,623	69,251
Prescott	21%	0.18	10,043	47,824
Safford	0%	n/a	n/a	37,602
Sedona	0%	n/a	n/a	41,896
Show Low	14%	0.17	3,900	27,857
Sierra Vista	22%	0.23	12,014	54,609
Winslow	0%	n/a	n/a	28,656
Yuma	49%	0.95	75,165	153,398
Summary of Study Airports			265,948	952,520
Overall Enplanements per Capita Ratio				2.06

Note: n/a=not applicable

1/ For purposes of this analysis 2.5% of enplanements at Grand Canyon Airport were attributed to locally generated demand.

2/ Due to temporary cessation of EAS funding during 1997, 1998 enplanements were not considered to be representative for Kingman. An average historical enplanement figure of 3,300 was used as a basis for enplanements to develop a more realistic potential demand estimate for Kingman.

Source: Airport Management Records  
Wilbur Smith Associates, Inc.  
AirTech, Inc.



- Distance and quality of ground access to competing airports
- Level of commercial air service available at competing airports
- Number of airports that are in competition for passengers associated with a particular market area
- Distance passengers are traveling to reach competing airports
- Factors causing diversion from the service areas of study airports
- Influence of out-of-state airports on Arizona passengers

In making their travel decisions, passengers often consider the factors noted above and other "sensitivity" factors to determine how they will travel to their intended destination. As identified in all survey efforts conducted as part of this study, many travelers are willing to drive five hours one way, bypassing other airports to reach large commercial service airports which are both within and beyond Arizona. These passengers are heavily weighted in terms of pleasure or vacation-related (discretionary) travelers who generally have the highest propensity to leave their local market area and drive to a more distant departure airport. Depending upon the time involved and the advantages gained, non-discretionary or business-related travelers will also leave the local market area for their airline departures. The discretionary character of many of Arizona's travelers indicates that passenger leakage can be expected to remain notable, even with air service improvements at study airports.

Recent studies on the psychology of air travelers have shown that the total number of flights offered is one of the most highly rated factors in a passenger's decision-making process. This is particularly true for business travelers. Generally speaking, passengers reason that the more flights offered, the greater their chances of reaching their destination. Airline schedules that offer high departure frequencies and conveniently timed flights can often draw passengers from one market to another. Many travelers often choose to leave the local market area to obtain nonstop versus connecting service on their departure flight. If a passenger is within driving distance of an airport that offers a high volume of nonstop service, the passenger may frequently drive to this airport for their departure to avoid "connecting service" to reach his or her destination. Some passengers choose this type of travel pattern because they fear missing their airline connections.

For many of the study airports, their only scheduled air service is to Phoenix and their service is provided by only one airline. Many passengers reason that by the time they drive to their local airport, park, board a flight, fly to the connecting hub (Phoenix), and wait for their connecting flight, they could have just as easily, from a cost and time perspective, driven directly to the more distant airport for their departure. The fact that some passengers avoid flying on the smaller regional/commuter aircraft, whenever possible, is another passenger sensitivity that is often factored

into the decision-making process. Code-sharing and ticket pricing agreements between the major/national carriers and their regional/commuter affiliates, along with the ever increasing sophistication of the commuter carriers and the aircraft they operate, have helped to dispel some passenger aversion to smaller aircraft. The size of the aircraft serving the airport is still, however, a factor in the passenger's decision-making process when selecting a departure airport. This sensitivity factor must be weighed when determining how successful each airport will be in attracting unconstrained passenger demand associated with its market area.

Airline loyalty, as driven by a passenger's vested interest in a particular carrier's frequent flyer program, often influences a passenger's decision-making process as it relates to selecting a departure airport. In situations where a particular airline has served a community for an extended period of time and then terminates service, an impact on the passenger's decision-making process for a departure airport may be experienced. If the airline continues to serve a nearby city, passengers may drive to a competing airport to continue to build equity in their established frequent flyer program. Loyalty to frequent flyer programs has also proved to be a formidable obstacle to new carriers who attempt to initiate service in an established carrier's market.

With commercial airline fares seemingly always on the rise, the availability of discount fares is often the major factor that enters into the passenger decision-making process. Southwest Airline's presence at Phoenix, Tucson, and Las Vegas and the America West hub at Phoenix impact all of the markets in the State by attracting passengers with low fare service. This is anticipated to continue to occur and must be factored in as potential demand estimates are developed.

As the market for each study airport is examined to establish its potential demand, these passenger sensitivity factors are considered to determine each airport's likelihood of increasing the percentage of its unconstrained passenger demand that it enplanes. It is important to restate that few markets capture 100 percent of their unconstrained demand. Most markets throughout the U.S. experience some level of leakage for reasons previously discussed. The potential demand estimates developed in this section represent an upset maximum of the capture rate that may occur at the study airports with changes in service patterns or carriers. The following sections detail the assumptions that were used to estimate each airport's potential enplanement levels.

#### **A. Bullhead City**

The diagnostics element of this study showed that the Laughlin-Bullhead City International Airport is currently capturing approximately 24 percent of its total unconstrained demand for commercial or travel or 64,094 annual enplanements in 1997. The airport competes primarily with Las Vegas McCarran International for its passenger base. The airport has seasonal scheduled air charters serving demand for local gaming resorts. The market, however, is impacted by the type of visitors traveling to the area. Bullhead City attracts median to lower-end gamers who are generally using air travel only if it is very inexpensive. The fact that large charter jets serve the market affects the airport's ability to attract its

passenger base to use the smaller regional/commuter planes. Local area businesses primarily serve the needs of the employees in the gaming industry and do not rely on airline service. However, the local economy is beginning to diversify. This diversification may lead to additional businesses locating in the area who rely on air service.

Enplanements have fluctuated since service was initiated at the Laughlin-Bullhead City International Airport. In 1995, enplanements exceeded 118,000. For 1997, enplanements totaled 64,094. Market characteristics, distance to competing airports, service trends, and highway access were reviewed to determine the airport's ability to capture its identified demand. These factors indicate that the airport could capture approximately 45 percent of its total unconstrained demand; total unconstrained demand for this market was estimated to be 217,058 annual enplanements. This capture rate results in approximately 120,176 potential enplanements for the Bullhead City market area for the current time frame.

## **B. Flagstaff**

The diagnostics effort identified that the Flagstaff-Pulliam Airport is currently capturing approximately 31 percent of its total unconstrained enplanement demand. In 1997, this capture rate translated into 47,058 persons who actually boarded commercial flights at this airport. The enplanement level at this airport is impacted by highway competition to Phoenix. Primary reasons for passenger leakage from the Flagstaff market include:

- Passengers leaving the market to access carriers other than Mesa Airlines
- Passengers leaving the market to obtain lower/discounted fares

Historically, annual enplanements have remained at approximately 45,000. In order to increase enplanements, a second carrier is needed to provide additional aircraft seats and greater flexibility in the schedule and in the departure and arrival times of flights. Market characteristics, distance to competing airports, historic enplanements, service trends, and highway access were reviewed to determine the airport's ability to capture its identified total unconstrained demand (151,800). Based on these factors, it appears that the airport may be able to capture approximately 65 percent of its total unconstrained demand. This capture rate results in approximately 98,670 potential enplanements in the Flagstaff market area for the current time frame.

## **C. Grand Canyon**

Since passengers using the Grand Canyon National Park Airport seldom, if ever, enter the airport's terminal building, passenger surveys were not conducted at this airport. Travel agents in the market area indicated that less than five percent of all annual tickets sold are for departures from the local airport. While the airport enplanes over 630,000 annual travelers, almost all are tourists who arrive at the airport for the day as part of an all inclusive

tour package. All flights to this airport now originate and return to one of the three airport locations in Las Vegas, where the passengers' travel can either terminate or continue via an airline connection. A high percentage of the passengers using this airport's existing charter airline service are visitor to the U.S.

This air service analysis is focused on identifying air service improvements which may be viable in the near term. While it may be possible to eventually attract more of the airport's current charter passenger who are sight seeing to scheduled airline carriers, this analysis focused on scheduled service that could be supported today. The demand estimate used for this airport assumes that approximately 15,800 annual enplanements were potential travelers who could be better served by scheduled versus charter airlines.

#### **D. Kingman**

The Kingman Airport is currently capturing approximately 21 percent of its total unconstrained enplanement demand, according to data from the diagnostics element of this study. As previously noted, 1997 enplanements were not used to develop an unconstrained demand level due to temporary cessation of EAS funding during 1997. Using enplanements for three years (excluding 1997), an average annual enplanement level for the Kingman Airport is 3,300. Therefore, unconstrained demand for Kingman is estimated to be 15,714 enplanements.

The airport competes for passengers with airports at Bullhead City and Las Vegas. The airport's ability to capture demand is impacted by its high level of vacation/personal travel versus business travel. Travelers flying for vacation/personal reasons have a greater propensity to drive to a competing airport offering less expensive fares and a greater frequency of service. Passengers are also more inclined to drive north to Las Vegas for commercial air service than fly south to Phoenix for a connection to their final destination.

Enplanements at the Kingman Airport have fluctuated significantly since 1994; in 1994, enplanements exceeded 3,440. Based on the factors reviewed, the airport could capture approximately 55 percent of its total unconstrained demand. This capture rate results in approximately 8,643 potential enplanements for the Kingman market area for the current time frame.

#### **E. Lake Havasu City**

The survey results of this study showed that Lake Havasu City Municipal Airport is currently capturing approximately 26 percent of its existing total unconstrained year-round demand for commercial air travel or 10,668 enplanements in 1997. The airport competes for passengers primarily with Las Vegas, but also with Bullhead City due to the fact that this airport has charter jet service.

The high level of visitors and second-home travelers impact passenger leakage in the Lake Havasu City area. Demand levels have also been impacted by the size of aircraft serving the airport. Improvements in the level of service provided at that airport could reduce current passenger leakage to Las Vegas.

Enplanements at Lake Havasu City Municipal Airport have reached 15,000 in the past. It appears that the airport may be able to capture up to 60 percent of its total year-round unconstrained demand, if improvements were made in the level of commercial airline service provided. This capture rate results in approximately 24,619 potential year-round enplanements in the Lake Havasu City Municipal Airport.

#### **F. Page**

According to the results of the diagnostics element of this study, Page Municipal Airport is currently capturing approximately 37 percent of its existing unconstrained commercial air travel demand. This level of demand translated into 25,623 annual enplanements in 1997. Page is located in a very remote area of the State, and it is not in proximity to other commercial service airports. The airport competes for passengers primarily with Phoenix, but also, on a more limited basis, with Flagstaff. Grand Canyon also accounts for a minimal amount of passenger leakage from the Page service area. Page has a high visitor/tourist population during the summer months, due to its proximity to the resort area of Lake Powell in nearby Utah.

Page Municipal Airport is an EAS airport that currently has only one carrier. To date, very few carriers have expressed interest in servicing the Page area. Until 1997, the highest level of enplanements experienced at Page Municipal Airport was near 20,000. The 1997 level of over 25,000 enplanements is the highest level recorded at the airport and is attributed to the new service provided at the airport. Market characteristics, distance to competing airports, historic enplanements, service trends, and highway access were reviewed to determine this airport's ability to capture its identified total unconstrained demand for air travel. Based on these factors, it is estimated that the airport could, for the current time frame, capture 50 percent of its total unconstrained demand or 34,626 potential annual enplanements.

#### **G. Prescott**

The diagnostics effort identified that the Prescott Ernest A. Love Field Airport is currently capturing approximately 21 percent of its total unconstrained commercial air travel demand or 10,043 annual enplanements in 1997. The airport competes for passengers primarily with Phoenix. The airport's current level of EAS service is characterized by small, regional/commuter aircraft performing only a limited number of departures. In part, this service has contributed to the inability of the airport to capture a notable portion of its

unconstrained demand. It is difficult, however, for any airport that is located within 94 miles of a major hub airport, such as Phoenix Sky Harbor, to compete effectively and to capture a significant portion of market's demand.

Enplanements at the Prescott Ernest A. Love Field Airport have fluctuated. The airport had a historical high of 14,000 annual enplanements in 1994. It is estimated that the primary reason for passenger leakage from Prescott is its proximity to Phoenix. It is estimated that this airport could capture approximately 40 percent of its total unconstrained demand. This capture rate results in approximately 19,130 potential enplanements for the Prescott market area for the current time frame.

#### **H. Safford**

As previously discussed, Safford Municipal Airport does not currently have scheduled commercial airline service. The airport's service was terminated before Deregulation in 1978. Since service is not currently available, it was not possible to survey passengers using this airport. As a result of the historical lack of service to this market, the area has not been able to attract new carriers and to build service.

With the exception of Phelps Dodge, there are few businesses in the area utilizing commercial air service. Many employees of Phelps Dodge drive approximately 80 miles east to Silver City, New Mexico, to obtain commercial airline service. Passenger leakage in the Safford area is also due to Safford's proximity to Phoenix and Tucson where larger jet service is readily available. The distance to competing airports and historical lack of service affect this airport's ability to capture its unconstrained demand. Based on these factors, it is estimated that the airport may be able to capture, at most, 15 percent of its total unconstrained demand or 5,640 potential enplanements.

#### **I. Sedona**

The Sedona Airport also does not currently have scheduled commercial air service. Service at this airport was terminated in August 1995. The airport was most recently served by Scenic Airlines. The diagnostics effort revealed that passenger leakage from the Sedona market is primarily to Phoenix and Flagstaff. Passengers routinely drive to Phoenix to obtain frequent service and low fares. Flagstaff is also a logical choice for travelers from the Sedona service area due to its proximity and accessibility.

The Sedona area has a high level of visitor and tourist demand. A large percentage of the visitors who come to this area utilize general aviation aircraft as their mode of transportation. The distance to competing airports and highway access affect this airport's ability to capture its unconstrained demand. Based on these factors, it is estimated that this airport may be able to capture 15 percent of its total unconstrained demand. This capture rate results in

approximately 6,284 potential enplanements for the Sedona market area for the current time frame.

#### **J. Show Low**

Although travel agency results showed little usage by local air travelers, the passenger survey results revealed more significant usage. Using the methodology described earlier, an average capture rate of 14 percent was assumed to occur on a year-round basis in Show Low. This capture rate is based on an annual extrapolated enplanement level of 3,900 enplanements. The airport primarily competes for its passengers with Phoenix, even though the drive to Phoenix is long and arduous.

Show Low Municipal Airport recently re-gained commercial air service in May 1998. Sunrise Airlines is the carrier providing service. This carrier provides service with an aircraft purchased by the community. In the past 15 years, the airport has had unstable service and which has been provided by several different carriers. The unreliability of service in the past has impacted passenger leakage from the Show Low service area. The existing service by Sunrise Airlines offers no fare advantages; the carrier does not code-share with any other carriers. This results in limited air transportation accessibility. The current service is used primarily as a means to travel only to Phoenix. If a carrier served the market who offered through fares with carrier operating in Phoenix, it appears that the airport could capture approximately 25 percent of its total year-round unconstrained demand. This capture rate results in approximately 6,964 potential year-round enplanements in the Show Low market area.

#### **K. Sierra Vista**

The survey results from this study showed that the Sierra Vista Municipal Airport is currently capturing 22 percent of its unconstrained commercial air travel demand or 12,014 annual enplanements in 1997. The airport primarily competes for its passengers with Phoenix and Tucson. The airport's current level of service, which is characterized by small, regional/commuter aircraft performing only a limited number of departures, has contributed to the inability of the airport to capture a notable portion of its unconstrained demand. It is difficult for any airport that is located within 70 miles of an airport, such as Tucson International, to compete effectively and to capture a significant portion of its associated passenger demand. Despite this handicap, the proximity of Ft. Huachuca to Sierra Vista increases the airport's ability to attract passenger demand. It has been noted that the high military population in the community drives air service demand in the Sierra Vista service area.

Enplanements at the airport have decreased since 1996, when the enplanement level reached a high of 12,783. Primary reasons noted for passenger diversion from the Sierra Vista

market area include the size of the aircraft serving the market, the lack of available seats, and distance to competing airports. Based on these factors, it is estimated that the airport could capture up to 50 percent of its total unconstrained demand or 27,305 potential enplanements.

#### **L. Winslow-Holbrook**

Winslow-Lindbergh Regional Airport does not presently have scheduled commercial air service. Winslow has been without scheduled passenger service since 1991. From 1982 to 1988, enplanement levels were relatively low, with the highest level of enplanements, 645, having been reached in 1985. Reasons noted for passenger leakage from the Winslow market include a limited number of businesses in the community who rely on air service and the accessibility by highway of Flagstaff. Winslow is on the edge of Flagstaff's service area. Holbrook, located east of Winslow, was also considered as part of the market area for this study airport. The location of Winslow within the Flagstaff market area impacts the airport's ability to capture a significant portion of the area's unconstrained demand.

Market characteristics, distance to competing airports, and highway access were reviewed to determine the airport's ability to capture its identified unconstrained demand for commercial air service. Based on these factors, it appears that the airport could capture up to 15 percent of its total estimated unconstrained demand. This capture rate results in approximately 4,298 potential enplanements for the Winslow-Holbrook market area for the current time frame.

#### **M. Yuma**

Yuma International Airport serves the air travel needs of the Yuma market area. Results of the diagnostics effort showed that Yuma International is currently capturing approximately 49 percent of its total unconstrained demand for commercial airline travel. In 1997, this capture of demand translated into 75,165 annual enplanements. The airport competes for passengers with airports which include San Diego and Phoenix; interstate highways east and west of Yuma provide access to these competing airports. The airport's service to two airline hubs (Phoenix and Los Angeles) increases its ability to capture its associated unconstrained demand for commercial airline travel. Other factors contributing to the airport's ability to capture unconstrained demand include Yuma's growing business base and its notable military population.

Enplanements at Yuma International Airport have fluctuated similar to other Arizona markets. The primary reasons for passenger diversion from the Yuma market include:

- Passengers leaving the market to obtain service on discount carriers
- Passengers leaving the market due to problems with airline reliability
- Passengers leaving the market to obtain nonstop service to their final destination



Fares charged by Mesa Airlines have also contributed to passenger leakage from this market. Based on these factors, it appears that the airport could capture up to 70 percent of its total unconstrained demand. This capture rate results in approximately 107,379 for the Yuma market area for the current time frame.

### **3. SUMMARY**

This chapter of the Arizona Air Service Study used the results of the various survey efforts to determine both unconstrained and potential demand estimates for each airport included in this study. The unconstrained demand levels represent a level of demand that, for most markets, cannot be achieved because of extraneous factors that limit each airport's ability to capture all air travel demand that is associated with its service area. Potential demand estimates consider the extraneous factors in each market and represent the maximum level of air travel demand that may be able to be achieved by each airport, assuming improvements in existing air service. **Table 6-5** presents a summary of 1997 enplanements and estimates of unconstrained and potential enplanements for each of the markets. Potential demand levels are used as input for the subsequent route analyses that is used to determine the ability of each airport to actually support improved commercial airline service.

TABLE 6-5

Arizona Department of Transportation  
Arizona Air Service Study

SUMMARY OF DEMAND LEVELS

<b>Airport</b>	<b>1997 Enplanements</b>	<b>Current Unconstrained Enplanements</b>	<b>Estimated Potential Enplanements</b>
Bullhead City	64,094	267,058	120,176
Flagstaff	47,058	151,800	98,670
Grand Canyon	632,971	39,500	15,824
Kingman	1,559	15,714	8,643
Lake Havasu City	10,668	41,031	24,619
Page	25,623	69,251	34,626
Prescott	10,043	47,824	19,130
Safford	n/a	37,602	5,640
Sedona	n/a	41,896	6,284
Show Low	3,900	27,857	6,964
Sierra Vista	12,014	54,609	27,305
Winslow	n/a	28,656	4,298
Yuma	75,165	153,398	107,379

Source: Wilbur Smith Associates, Inc.  
AirTech, Inc.